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Measuring what matters - broadening official statistics:
Session 1: Emerging topics

Measurement of subjectivity in social statistics

Note by Statistical Office of the Slovak Republic

Summary

The document presents a case of broadening official statistics to subjective measurements based on an example of measuring subjective well-being (happiness). In measuring subjectivity in official statistics, it is essential to cooperate with sociologists and psychologists, communicate the subjective measures in connection with objective measures, take into account the cultural bias (especially when comparing results internationally), and describe how the data were obtained.

The document is presented to the Conference of European Statisticians' seminar on "Measuring what matters - broadening official statistics", Session 1: "Emerging topics" for discussion.

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I. Introduction

1. Statistics are nowadays opening up to new sources and methods but also to new themes. It is expected that this will result in some positive outcomes.

2. But how is this accepted by the social environment? What are the impacts and requirements when including a new topic in statistics? We will try to answer these questions with an example of measuring subjective well-being (in particular happiness), which is now becoming more and more an integral part of measuring the quality of life in official statistics. At the same time, there are many conceptual and practical problems with measuring and using this theme.

3. Inclusion of the measuring the quality of life in statistical production was a reaction of official statistics to reservations about using gross domestic product as an indicator of subjective well-being of individuals. The very concept of quality of life has been imported into statistics from other scientific disciplines, mainly from sociology and psychology. The concept takes on a statistical character because statistical sample surveys are used as a preferred data source, the indicators meet the statistical quality and production requirements and, last but not least, it is analysed using statistical methods.

II. Measuring subjective well-being

4. The main source of data for the calculation of indicators for measuring the subjective quality of life is the harmonized European Survey on Income and Living Conditions (EU SILC).

5. The well-being module was included in EU SILC in 2013 on the basis of the practice of annual inclusion of the so-called specific (secondary) variables that extend the picture about poverty and social exclusion. For the first time EU SILC included variables that were not focused on the main objective of the survey, which is to provide data on income inequality, poverty and social exclusion. The new module was to fill gaps in the system of proposed quality of life indicators for the European Statistical System.

6. The module contained in total 22 variables to measure mental well-being (feelings of nervousness, depression or frustration, feelings of peace and serenity) and measurement of the feeling of happiness. This is associated with the concepts of hedonistic and eudemonic well-being[1].

7. Subjective well-being was also measured by overall life satisfaction and the meaning of life. Overall life satisfaction was understood as the assessment of the respondent's life as a whole, taking into account his or her opinion/feeling of satisfaction with his or her life, i.e. how an individual perceives himself/herself at a certain time. The intention was not to obtain information about the current emotional state of the respondent, but about the judgment based on the reflection of himself/herself. Meaning of life was understood in terms of life goals and values.

8. When measuring the overall satisfaction according to the results of the frequency distribution of particular scale points, the residents of Slovakia are satisfied rather than dissatisfied and rated at 7.0 on a scale of 0 to 10, with the median value of 7 and the mode value[2] of 8. It is, however, in contrast with the international position of Slovakia in deprivation measuring, where the Slovaks present themselves negatively more often than

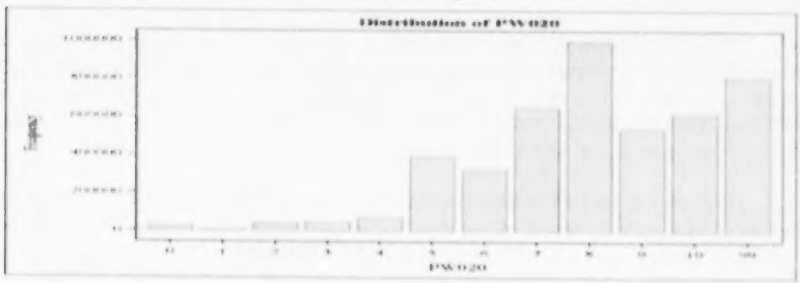
[1] Hedonistic well-being emphasizes primary happiness; eudemonic well-being focuses on the meaningful life of an individual in relation to social values and his self-realization.

[2] The mean and median are measured from weighted data, mode from unweighted data.

other countries (i.e. the most dejected). According to the OECD Better Life Index (2017), the overall satisfaction with life in Slovakia is at the level of 6.1 measured on a scale of 0 to 10 and has increased over the last decade.

Chart 1

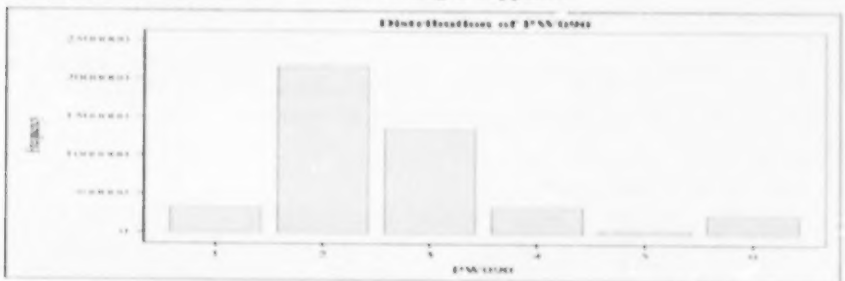
Frequency distribution of variable - the meaning of life



9. The assessment of the meaning of life on the same scale from 0 to 10 reaches similar values (the average is 7.5) while the value of the median and the mode is 8. A relatively high shares of respondents answered "I do not know" (99).

Chart 2

Frequency distribution of the variable - feeling of happiness



10. In the World Happiness index (World Happiness Report 2017), Slovakia ranked 40th. The feeling of happiness has increased considerably compared to 2006-2007. The frequency distribution of the variable – 'feeling of happiness' measured in EU SILC is presented in chart 2.

11. Nolan and Lang (2009) identified the following aspects of statistical thinking: problem decomposition and identifying key components, summarizing and formulating different strategies, connecting the original problem with the statistical framework, selecting and applying methods, resolving constraints, and communicating the findings. In the measuring subjectivity, the communication of the findings proves to be a key component. The communication should focus on explaining the concepts used, possible differences in the results when the various measurements are used, and on the development trends.

12. If trends are the same or similar, the explanation seems to be easier. But if the trends differ, the user may question the source of the data, and with subjective measurements, the whole concept as well. If the concept of measuring happiness is not clearly explained, the public may understand it differently from the statistical measures.

13. It is important to convey the trends. Therefore measurement of subjectivity in statistical production should be done regularly, not only once, and at regular intervals. This is the only way to confirm or refute claims, for example, on the more frequent use of the centre of the scale of subjective measurements conducted in Central Europe. When subjective indicators are measured systematically, this allows to analyse the influence, for example, of socio-political events and their impact on the measurement results.

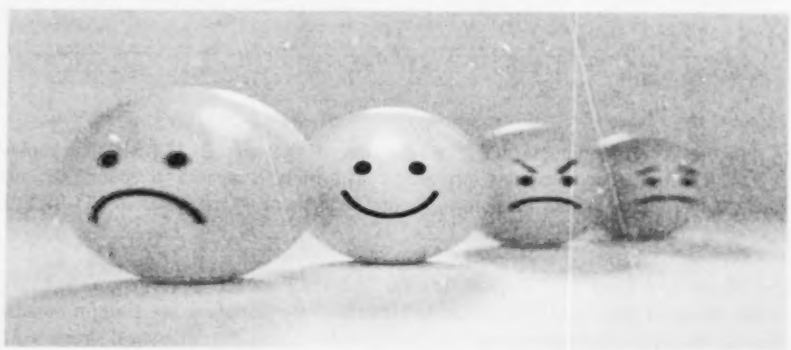
14. The objectification of subjective indicators seems to be a key action. The indicators should be presented as part of a comprehensive view, not just the figures in a table. Likewise, subjective indicators should always be presented in connection with objective indicators. The respective analysis should include not only statistics but also the explanation of why it is in such a way.

15. Discussion about what scientists want and statisticians need to know about the issues took place in several forums in Slovakia. The most event was the conference "Quality of Life in the Context of Poverty" in December 2017 where statistical data were compared with a psychological approach to measuring subjective well-being. Existing problems of validity and interpretation of data (especially if they are the result of subjective measurements) place great importance on analysis and evaluation of results. This requires cooperation with experts from other areas who measure the quality of life, the subjective aspects of quality of life or subjective well-being.

16. It is necessary to realize and correctly inform users that discrepancies with other sources can help to identify problems, especially in complicated social reality.

17. The users are not always experts. This shows the need to use everyday language and modern tools of visualization that help users better understand the data. People like to find other people in data and identify themselves with other people.

Picture 1
Who represents your country?



III. Conclusion

18. In conclusion we can say that when measuring new phenomena, for example, subjectivity, for the statistical practice the following points are essential:

(a) *Partnership* – for better capturing national specificities, it is needed to cooperate with sociologists and psychologists as early as possible in the phase of preparing the concept as well as the measurement.

(b) Objectification of subjective measurements –communicate and present the results in connection with objective measurements (e.g. relationship of life satisfaction and public engagement).

(c) Taking into account the cultural bias - especially for surveys to be used for international comparisons, and how it might explain the results achieved.

(d) Survey design - describe the data source in such a way that it is clear not only how the data were obtained but also why they were acquired in that way.

19. Statistics do not inevitably have to measure subjective phenomena, but should participate actively in the development of tools and methods for measuring the new phenomena. That would contribute to the validity of results regardless of who performs the measurement.

References

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